

Type D Personality and Heart Disease: Walking the Line Between Enthusiasm and Disbelief

Gesine Grande, Dr. p.h. · Matthias Romppel, MSc ·
Jürgen Barth, PhD

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After many years of enthusiastic reports on the prognostic potential of the type D construct in patients with coronary heart disease, a critical discussion of methodological shortcomings of type D research was initiated recently. In their letter, de Voogd and colleagues summarize some of the critical issues we mentioned in our meta-analysis, issues that have been well documented elsewhere [2]. We agree with de Voogd and colleagues that small sample sizes, overfitted regression models, and the predominant use of dichotomized type D categories are methodological shortcomings of many primary studies on the effects of type D on prognosis in cardiac patients. That may lead to a higher probability for an overestimation of effects and spurious results, but it does not generate positive results per se.

We also agree that a meta-analysis cannot overcome methodological shortcomings of primary studies. Therefore, we conducted sensitivity analyses and carefully described potential weaknesses and strengths of the included primary studies. Our meta-analytic conclusion that there is a prognostic association of type D with mortality was qualified by

three other important points: (1) studies with lower methodological quality report have larger effects, (2) the effects decline considerably over time (as reported previously for other personality constructs such as the type A behavior pattern and also for biomedical research [1]), and (3) type D personality may not be associated with prognosis in chronic heart failure patients. Despite the overall significant meta-analytic risk estimate, these caveats raise doubt regarding the prognostic value of type D. Moreover, our work underscores the necessity and utility of quantitative reviews to identify problems in a body of literature.

The assertion by de Voogd et al. to banish the concept of type D personality seems premature based upon the available evidence. Aside from additional prospective studies, the most straightforward approach would be to reanalyze primary data from available type D studies with appropriate regression models and in an individual patient data meta-analysis to obtain greater statistical precision [2]. Such research incorporating narrative reviews and quantitative meta-analysis will provide the most defensible conclusion whether type D personality is associated with prognosis in CHD patients or not.

G. Grande (✉) · M. Romppel
Faculty of Applied Social Sciences,
Leipzig University of Applied Sciences,
POB 301166,
04251 Leipzig, Germany
e-mail: grande@fas.htwk-leipzig.de

J. Barth
Institute of Social and Preventive Medicine (ISPM), Division
of Social and Behavioral Health Research, University of Bern,
Bern, Switzerland

References

1. Ioannidis JP, Panagiotou OA. Comparison of effect sizes associated with biomarkers reported in highly cited individual articles and in subsequent meta-analyses. *JAMA*. 2011; 305: 2200–2210.
2. Smith TW. Toward a more systematic, cumulative, and applicable science of personality and health: Lessons from type D personality. *Psychosom Med*. 2011; 73: 528–532.